

## BOOK REVIEWS

**The New Field Book of Freshwater Life.** Elsie B. Klots. G. P. Putnam's Sons, New York, 1966; 398 pp., 4½" × 7½", illus.; \$4.95.

This book should succeed worthily to the place in our affections long occupied by its predecessor, *The Field Book of Ponds and Streams* by Ann Haven Morgan (Putnam, 1930). Shorter by 50 pages, but a half inch longer and wider in page size, it contains more than twice as many illustrations (over 700) and information regarding many more kinds of plants and animals.

The general scheme of the book resembles the earlier work. There is an introductory chapter briefly describing various kinds of freshwater environment and certain of the limiting factors affecting their plant and animal inhabitants. A second chapter lists, defines, and classifies a number of ecological and other technical terms. The remaining 14 chapters deal successively with the various major groups, first the microorganisms including the Protista, then the bryophytes and higher plants, and finally (Chapters 6 to 16) the animals. The glossary has been omitted, but there is an adequate bibliography and an excellent index. An appendix includes brief suggestions about collecting equipment and about the care and preservation of specimens, and the text discussion of each group of organisms gives valuable hints and directions for the collector. The geographical coverage is for America north of Mexico.

The most noteworthy change is the inclusion of outline groupings intended for the ready determination of the commoner freshwater organisms to taxonomic orders and families, and, for some, to genera. These groupings are in some ways like binary keys, but without the strictly formal and artificial use of couplets. Most of the groupings seem simple and practical, and even the one for the orders of aquatic insects (pp. 176-179) is probably as little confusing as such a scheme can be. Only the use of the book in the field, by the amateur for whom it is mainly intended, will tell whether the grouping plan will do what its author expects of it. Conventional dichotomous keys to the genera of stonefly, mayfly, and odonate nymphs are given in the appendix.

The eight color plates, including photographs of various types of freshwater environment and both photographs and color drawings of characteristic occupants, appear as a group following Chapter Two. The drawings throughout are of the excellence for which the artist, SuZan Noguchi Swain, is well known. In a few instances the text references are not readily correlated with the figure labels, as on pages 237-239, where the text refers to families while the figure labels give only genera. The type face is slightly larger than that used in Dr. Morgan's book, but there are six more lines to the page of text. The legibility is good, and one hopes that the paper will better resist the yellowing with age that affects the earlier volume.

No book as rich in detail as this one could be wholly free of errors, but the ones I have noticed are mostly trivial and of little consequence for most readers. Probably no one will be seriously misled by the term "pH concentration," by the references (p. 174) to "psychodid caterpillars," or by the substitution of "ventral" for "vertebrals" in the diagram of the turtle shells (Fig. 86), and I have often wondered why the type genus of the water mite family Hydryphantidae is spelled as it is instead of more plausibly "*Hydrophantes*" (and "Hydrophantidae") as on pages 167 and 166.

Mrs. Klots writes with warmth and clarity as well as with scrupulous competence. For little more than a penny a page, she and Mrs. Swain have given us a treasure. Their book well deserves the wide circulation and abundant praise that it is certain to receive.

A. E. TREAT